What is Claimed is:

1. A method for prophylaxis or treatment of sepsis and septic shock in an human or animal comprising administering a therapeutically appropriate amount of a sophorolipid mixture to a human or animal.

2. The method as claimed in Claim 1, wherein the mixture is administered by a method selected from the group consisting of intraperitoneal administration, intraarterial administration, and intravenous administration.

3. The method as claimed in Claim 2, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

4. A method for producing sophorolipids for prophylaxis or treatment of sepsis and septic shock in a human or animal comprising the steps of:

a. synthesizing the sophorolipids by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b. utilizing the natural mixture for prophylaxis or treatment of sepsis and septic shock in a human or animal;

c. separating the lactonic sophorolipids from the natural mixture to form a lactonic fraction and mixing all remaining fractions to form a non-lactonic fraction;

d. utilizing the lactonic fraction for prophylaxis or treatment of sepsis and septic shock in a human or animal; and

e. utilizing the non-lactonic fraction for prophylaxis or treatment of sepsis and septic shock in a human or animal.

5. A method for producing sophorolipids for prophylaxis or treatment of sepsis and septic shock in a human or animal comprising the steps of:

a. synthesizing the sophorolipid by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids; and

b. utilizing the natural mixture for prophylaxis or treatment of sepsis and septic shock in a human or animal.

6. A method for producing sophorolipids for prophylaxis or treatment of sepsis and septic shock in a human or animal comprising the steps of:

a. synthesizing the sophorolipid by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b. separating the lactonic sophorolipids from the natural mixture to form a lactonic fraction and mixing all remaining fractions to form a non-lactonic fraction; and

c. utilizing the lactonic fraction for prophylaxis or treatment of sepsis and septic shock in a human or animal.

7. A method for producing sophorolipids for prophylaxis or treatment of sepsis and septic shock in a human or animal comprising the steps of:

a. synthesizing the sophorolipid by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b. separating the lactonic sophorolipids from the natural mixture to form a lactonic fraction and mixing all remaining fractions to form a non-lactonic fraction; and

c. utilizing the non-lactonic fraction for prophylaxis or treatment of sepsis and septic shock in a human or animal.

8. The method as claimed in Claim 1, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based.

9. The method as claimed in Claim 8, wherein the 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

10. The method as claimed in Claim 4, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based.

11. The method as claimed in Claim 10, wherein the 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

12. The method as claimed in Claim 5, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based.

13. The method as claimed in Claim 12, wherein the 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

14. The method as claimed in Claim 6, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based.

15. The method as claimed in Claim 14, wherein the 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

16. The method as claimed in Claim 7, wherein the sophorolipid is 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based.

17. The method as claimed in Claim 16, wherein the 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate based sophorolipid is selected from the group consisting of 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate, Hexyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate, and Ethyl 17-L[(2'-O-β-D glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

18. The method as claimed in Claim 4, wherein the mixture is administered by a method selected from the group consisting of intraperitoneal administration, intraarterial administration, and intravenous administration.

19. The method as claimed in Claim 5, wherein the mixture is administered by a method selected from the group consisting of intraperitoneal administration, intraarterial administration, and intravenous administration.

20. The method as claimed in Claim 6, wherein the mixture is administered by a method selected from the group consisting of intraperitoneal administration, intraarterial administration, and intravenous administration.

21. The method as claimed in Claim 7, wherein the mixture is administered by a method selected from the group consisting of intraperitoneal administration, intraarterial administration, and intravenous administration.

22. The method as claimed in Claim 1, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

23. The method as claimed in Claim 4, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

24. The method as claimed in Claim 5, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

25. The method as claimed in Claim 6, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

26. The method as claimed in Claim 7, wherein the mixture is administered in a dose of between about 2 mg of the mixture per kilogram of the human or animal and about 30 mg of the mixture per kilogram of the human or animal.

27. A composition for prophylaxis or treatment of sepsis and septic shock in a human or animal comprising a mixture of sophorolipids.

28. The composition as claimed in Claim 27 having the formula 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate.

29. The composition as claimed in Claim 27 having the formula Ethyl 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

30. The composition as claimed in Claim 27 having the formula Hexyl 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate.

31. The composition as claimed in Claim 27 mixed with a pharmaceutically acceptable carrier.

32. The composition as claimed in Claim 31, wherein the pharmaceutically acceptable carrier is selected from the group consisting of physiologically compatible buffers, physiological saline, a mixture consisting of saline and glucose, and heparinized sodium-citrate-citric acid-dextrose solution.

33. The composition as claimed in Claim 27, wherein composition is a pharmaceutically acceptable salt.

34. The application of sophorolipids synthesized by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids in combination with at least one sophorolipid selected from the group consisting of:

a. Sophorolipids synthesized by fermentation of *Candida bombicola* in a fermentation media to form a natural mixture of lactonic sophorolipids and non-lactonic sophorolipids;

b. 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate-6',6"-diacetate;

c. Ethyl 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate;

d. Hexyl 17-L-[(2′-O-β-D-glucopyranosyl-β-D-glucopyranosyl)-oxy]-cis-9-octadecenoate; and

e. combinations thereof,

for prophylaxis or treatment of sepsis and septic shock in a human or animal.

35. The application of the sophorolipids as claimed in Claim 34 in combination with known agents for prophylaxis or treatment of sepsis and septic shock in a human or animal.